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REMARKS

In the Office Action, claims 1, 2, 4-6, 8, 10 and 12-20 were rejected. By the present Response, claim 10 is amended and claim 20 is canceled. Upon entry of the amendments, claims 1, 2, 4-6, 8, 10 and 12-19 will remain pending in the present patent application. Reconsideration and allowance of all pending claims are requested in light of the above amendments and in view of the arguments herein below.

Objections to drawings

The Examiner objected to the drawings under 37 C.F.R. 1.83(a) for not showing the features of claim 10. By the present response, claim 10 has been amended to change "flame-free portions" to "flame restricted portions", which are clearly illustrated in the figures.

Objections to claims

The Examiner objected to claim 10 for the informality in the last line of claim 10. By the present response, claim 10 has been amended to correct the informality.

Rejections Under 35 U.S.C. § 102

The Examiner rejected claim 20 under 35 U.S.C. §102(b) as being anticipated by Riehl (US Patent No. 5,328,357). Applicants submit that claim 20 has been canceled thereby rendering the rejection to claim 20 as moot.

Rejections Under 35 U.S.C. § 103

Claims 1, 2, 4, 5, 6, 8, 10 and 20 are rejected under 35 U.S.C. §103(a) as being unpatentable over Fafet et al. (US Patent No. 5,931,152, hereinafter "Fafet") in view of Maughan (US Patent No. 5,899,681) and Sherman (US Patent No. 2,320,754). Claim 20

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has been canceled thereby rendering the rejection to claim 20 as moot. Rejected claims 1 and 10 are independent and will be discussed in detail below.

Claim 1 recites a burner assembly comprising a burner grate comprising a plurality of humps integrally formed in a glass ceramic cooktop, and distributed around an opening in the cooktop, as well as a burner positioned in the opening and comprising a plurality of burner ports to provide a flame, wherein the burner is configured to restrict flame formation out of the burner in selected areas of the burner as a function of non-symmetrical spacing between the burner ports.

Amended claim 10 recites a burner assembly comprising a burner grate comprising a plurality of humps, integrally formed in a glass ceramic cooktop, and distributed around an opening in the cooktop. The burner assembly also includes a burner, positioned in the opening and comprising a plurality of flame restricted portions between burner ports, wherein the flame-restricted portions are positioned to coincide with the burner grate proximate the burner, causing flames produced by the burner to be directed away from the burner grate.

Thus as a whole, the claimed invention as reflected in independent claims 1 and 10 recite burner ports configured to restrict flame formation with respect to the positioning of the burner grate. Applicants submit that Fafet, Maughan and Sherman, when viewed as a whole, do not teach or otherwise suggest such an arrangement.

The subject Office Action states that Fafet discloses a burner assembly including a burner grate with a plurality of humps in a glass ceramic cooktop and distributed around an opening and a burner positioned in the opening, where the burner includes an arrangement of burner ports. Further, the Office Action states that Fafet does not teach that the burner ports restrict flame formation as a function of non-symmetrical spacing of a plurality of second ports, or a plurality of flame-free portions between the burner ports.

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The Office Action relies upon Maughan as teaching first burner ports and second burner ports and states that a person of ordinary skill in the art, in selecting burner port spacing, would understand that it is undesirable to include burner ports that cause flames to impinge upon the burner grate. Sherman is further relied upon to support this assertion.

In contrast to claims 1 and 10, Maughan teaches a plurality of burner ports spaced about a sidewall and a plurality of paired ridges disposed on the top surface of the sidewall to define a plurality of *carryover slots* between opposing ridges. The flow area at the inlet of the carryover slot has a value less than the value of the flow area at the outlet of the carryover slot so as to reduce fuel-air mixture velocity and produce a low velocity, stable carryover flame that reduces the tendency of the main flame to lift. (*See* Maughan, Abstract). In addition, the carryover slot flows prevent a respective carryover flame from completely filling the perimeter of gas burner assembly between primary burner ports and allows adequate secondary air to rise between adjacent main burner flames resulting in reduction of carbon monoxide emissions.

Applicants submit that Maughan does not teach flame restriction through reconfiguration of the burner ports. Rather, Maughan teaches use of *additional carryover slots* to facilitate combustion at the otherwise unchanged main ports thereby reducing the carbon monoxide emissions. Furthermore, Applicants disagree with the broad sweeping statement in the Office Action that Maughan teaches uneven or non-symmetrical spacing by stating, "burner ports of this type of burner are typically but not necessarily evenly spaced". Although Maughan may suggest that burner ports may be uneven or non-symmetrically spaced, there is no teaching or suggestion that the spacing be based upon the location of the burner grate. In fact, Maughan does not make so much as a mention of a burner grate anywhere in the application let alone teach that the burner ports are configured to restrict the flame formation with respect to a burner grate.

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Sherman is cited to support the assertion that a person of ordinary skill in the art, in selecting burner port spacing, would understand that it is undesirable to include burner ports that cause flames to impinge upon the burner grate. However, this statement assumes that it would be obvious for a person recognizing such to reconfigure the burner ports to avoid flame impingement. Applicants submit that for someone wishing to reduce flame impingement upon the burner grate it would not be obvious to reconfigure the burner ports as claimed but rather to redesign the burner grate. In fact, although Sherman is cited for teaching a burner design, Sherman actually teaches a unitary burner and grate (see page 2, 2nd col., lines 72-74). In contrast, Applicants' claimed invention is directed towards reconfiguration of a burner such that the flames from the burner ports do not impinge upon an *integrally formed* burner grate within a glass cooktop. For at least this reason, Applicants submit it would not be obvious to combine the teachings of Sherman with that of Maughan and Fafet. Moreover, it appears that the Applicants' invention is impermissibly being used as a roadmap to find prior art components.

Thus, for at least these reasons, Applicants submit that independent claims 1 and 10 are allowable and respectfully request the Examiner to reconsider rejection of the claim.

Claims 2, 4, 5 and 6 are further directed to restricted flame formation. For example, in claim 2, spacing between a first set of burner ports and a second set of burner ports is not equal. In claim 4, the burner ports are spaced apart such that flame formation out of the burner ports is not directed toward the burner grate. Furthermore, as recited in claims 5 and 6, a subset of the burner ports are arranged at an angle with respect to a radial direction and the burner ports arranged at an angle comprise a single inlet end and a bifurcated outlet end. Claim 8 recites the burner assembly in combination with a cooking appliance. As claims 2, 4, 5, 6 and 8 depend from claim 1, Applicants submit that these claims are similarly allowable for at least the reasons set forth above with respect to claims 1 and 10.

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Claims 12-19

Claims 12-19 are rejected under 35 U.S.C. §103(a) as being unpatentable over Fafet in view of Riehl and Sherman. Rejected claim 12 is an independent claim and will be discussed in detail below.

Claim 12 recites a system comprising a burner grate and a burner comprising a first plurality of burner ports configured to provide a first unrestricted flame flow out of the burner, and a second plurality of burner ports configured to provide a second restricted flame flow out of the burner based at least in part upon positioning of the burner with respect to the burner grate.

Once again, Fafet is cited for teaching a burner assembly for a cooking appliance including a burner grate with a plurality of humps integrally formed in a glass ceramic cooktop and distributed around an opening and a burner positioned in the opening, where the burner includes an arrangement of burner ports. However, the Office Action states that Fafet does not disclose a second plurality of burner ports configured to provide a second restricted flame flow out of the burner based at least in part upon positioning of the burner with respect to the burner grate.

Riehl is cited for teaching a burner assembly including a first plurality of burner ports providing an unrestricted flame flow out of the burner and a second plurality of burner ports configured to provide a second modified flame flow and arranged in a modified pattern. It is also stated that Riehl teaches that the arrangement of flame ports may be adjusted as desired. The Examiner considers that a person of ordinary skill in the art, in selecting burner port spacing, would understand that it is undesirable to include burner ports that cause flames to impinge upon the burner grate. As support for this assertion, Sherman is again cited. Applicants respectfully disagree with such a characterization.

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When viewed as a whole, Riehl can be said to teach main burner ports used to create main flames at the burner ports with the flame means being propagated around the burner construction from port to port. In addition, Riehl teaches carryover means for propagating small carryover flames between adjacent sets of ports to the next set of ports. Further, by minimizing the carryover flame size, the induction of secondary air to the main ports of the burner construction is improved and the main burner ports can burn with improved combustion. Thus, Riehl provides *additional* (carryover) ports between the main ports to facilitate flame flow and improved combustion for main burner ports. That is, the main ports are *supplemented* with the additional ports for improving the induction of secondary air to the main ports.

In contrast, the present claimed invention teaches restricting or redirecting the flame flow through reconfiguring the spacing, or orientation of the main burner ports. In particular, the burner ports are configured to restrict the flame formation in a region proximate the burner grate. For example, in one embodiment, the spacing of the burner ports is selected to avoid flame formation in a region proximate the burner grate. Similarly, in another embodiment, an orientation of the burner ports is selected to deflect a flame from the port away from the burner grate. The main burner ports are reconfigured to include first and second set of ports for providing an unrestricted and restricted flame formation.

As discussed above with reference to independent claim 1 as applied to Maughan, Riehl does not teach restricted flame flow out of the burner based at least in part upon positioning of the burner with respect to the burner grate.

Sherman is again cited to support the assertion that a person of ordinary skill in the art, in selecting burner port spacing, would understand that it is undesirable to include burner ports that cause flames to impinge upon the burner grate. For at least the reasons

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set forth above with respect to claims 1 and 10, Applicants submit that it would not be obvious for someone giving the teachings of Fafet, Riehl or Maughan, and Sherman to reconfigure the burner ports as claimed. Thus, for at least these reasons Applicants submit that independent claim 12 is allowable and respectfully request the Examiner to reconsider rejection of the claims. Claims 13-19 are further directed to flame restriction through the burner ports. As claims 13-19 depend from claim 12, Applicants submit that these claims are similarly allowable for at least the reasons set forth above with respect to claim 12.

Conclusion

In view of the remarks and amendments set forth above, Applicants respectfully request allowance of the pending claims. If the Examiner believes that a telephonic interview will help speed this application toward issuance, the Examiner is invited to contact the undersigned at the telephone number listed below.

The Examiner is hereby authorized to charge deposit account no. 07-0868 in the event any fees shall be deemed due.

Respectfully submitted,

Date: _____

2/14/06



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